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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,774	03/29/2001	Michael S. Dashefsky	VITLCOM.065A	5512
7590 04/09/2007 Joseph D. Kuborn ANDRUS, SCEALS, STARKE & SAWALL 100 East Wisconsin Avenue, Suite 1100 Milwaukee,, WI 53202			EXAMINER GRAHAM, CLEMENT B	
			ART UNIT	PAPER NUMBER
			3692	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/821,774

Applicant(s)

DASHEFSKY ET AL.

Examiner

Clement B. Graham

Art Unit

3692

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-19,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3,5-19,21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/16/07 has been entered.

Claim Rejections - 35 USC § 103

2. Claims 1-3, 5-19, and 21-22, remained pending.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patent ability shall not be negated by the manner in which the invention was made.
4. Claims 1-3, 5-19, 21-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Conway US Patent No 5, 732, 401 in view of Nasburg US Patent No 5, 801, 943.

As per claims 1, Conway discloses a method of assessing patient flow through care units of a hospital ("i. e, caregiver") using a computer having a microprocessor comprising:
collecting a set of hospital statistical data, assigning an hourly cost to each care unit for each patient.(Note abstract .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67) building a model based upon the collected data and hourly cost.(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

Conway fail to explicitly teach simulating the flow of patients through the hospital using the model wherein the simulating step utilizes the collected data and using the model and the results of the simulating step to recommend hospital resources changes.

However Nasburg discloses the micromodel provides the traffic engineer with an intuitive and efficient method for describing or modeling complex traffic intersections and interchanges so that the kinematic behavior of all vehicles within that interchange

Art Unit: 3692

can be predicted. Parameters provided as inputs by the traffic engineer are mapped directly to a set of differential equations governing the movement through time of all vehicles within the interchange. The result is a compact dynamic model usable in vehicle tracking applications and in graphic simulations, including real time simulations, of vehicles as they proceed through the interchange.(see column 8 lines 4-14).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Conway to include simulating the flow of patients through the hospital using the model wherein the simulating step utilizes the collected data and using the model and the results of the simulating step to recommend hospital resources changes taught by Nasburg in order to simulate traffic patterns and provide resource recommendations.

As per claim 2, Conway discloses wherein each care unit is a hospital department. .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 3, Conway discloses further comprising using the model to estimate a cost savings that results from a purchase of patient monitoring equipment. .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 5, Conway discloses further comprising identifying a bottleneck in the flow of patients through the hospital. .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 6, Conway discloses where collecting data further comprises locating patients through a patient locating system. .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 7, Conway discloses wherein collecting data further comprises locating patients through a patient locating system. .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 8, Conway discloses wherein collecting real-time data comprises using a patient locating system. .(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 9, Conway discloses wherein collecting real-time data comprises using an equipment locating system. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 10, Conway discloses wherein collecting real-time data comprises using an Admission Discharge Transmission System. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 11, Conway discloses wherein collecting real-time data comprises using a point of care system. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 12, Conway discloses further comprising predicting a bottleneck in the flow of patients through the hospital through the use of the model. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 13, Conway discloses wherein the collected data comprises data regarding average patient length of stay in a care unit. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 14, Conway discloses further comprising determining alternative patient flow routes based upon optimizing efficiency of the hospital. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 15, Conway discloses further comprising determining resource utilization based upon the model. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 16, Conway discloses a computer system for modeling patient flow through care units of a hospital comprising:
a collection module configured to accept a set of hospital statistical data. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67) an assignment module configured to assign an hourly cost to each unit for each patient a model module configured to build a model of patients through the hospital. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

Conway fail to explicitly teach a simulation module configured to simulate the flow of patients through the hospital wherein the simulation module utilizes the set of hospital

Art Unit: 3692

statistical data a resource module configured to determine a resource utilization of the hospital by utilizing the model and the output of the simulation module.

However Nasburg discloses the micromodel provides the traffic engineer with an intuitive and efficient method for describing or modeling complex traffic intersections and interchanges so that the kinematic behavior of all vehicles within that interchange can be predicted. Parameters provided as inputs by the traffic engineer are mapped directly to a set of differential equations governing the movement through time of all vehicles within the interchange. The result is a compact dynamic model usable in vehicle tracking applications and in graphic simulations, including real time simulations, of vehicles as they proceed through the interchange.(see column 8 lines 4-14).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Conway to include simulation module configured to simulate the flow of patients through the hospital wherein the simulation module utilizes the set of hospital statistical data a resource module configured to determine a resource utilization of the hospital by utilizing the model and the output of the simulation module taught by Nasburg in order to simulate traffic patterns and provide resource recommendations.

As per claim 17, Conway discloses further comprising an estimation module configured to estimate a cost savings that would result from a purchase of patient monitoring equipment. (see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 18, Conway discloses further comprising an prediction module configured to predict a bottleneck in the flow of patients.(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 19, Conway discloses further comprising an identification module configured to identify a bottleneck in the flow of patients.(see column 5 lines 5-65).

As per claim 21, Conway discloses wherein the collection module is further configured to collect real-time hospital statistics.(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

As per claim 22, Conway discloses wherein the care units include at least the following hospital departments: Admitting, Intensive Care Unit, Surgery and Discharge.(see column 10 lines 3-20 and column 2 line 34-45 and column 2 lines 24-67).

Conclusion

RESPONSE TO ARGUMENTS

5. Applicant's argument's filed 1/16/2007 has been fully considered but they are moot in view of new grounds of rejection.

6. In response to Applicant's argument's that Conway and Nasburg fail to teach or suggest" simulating the flow of patients through the hospital using the model wherein the simulating step utilizes the collected data and using the model and the result of the simulating steps to recommend hospital resources changes, utilizing a model based on collected data and hourly costs, and using the model and the results of the simulating steps to recommend hospital resources changes, building a model to forecast based on collected data and the estimated hourly costs, and run a simulation based on a model utilizing an average of the collected data and simulating the flow of patients through the hospital using the model, wherein the model is based on collected data and hourly costs, and further wherein the simulating step utilizes an average of the collected data, and using the model and the results of the simulating step to recommend hospital resource changes" the Examiner disagrees with Applicant's because these limitations were addressed as stated, Conway discloses a method of assessing patient flow through care units of a hospital ("i. e, caregiver") using a computer having a microprocessor comprising, collecting a set of hospital statistical data, assigning an hourly cost to each care unit for each patient.(Note abstract .see column 10 lines 3-20 and column 2 lines 24-67 building a model based upon the collected data and hourly cost. see column 10 lines 3-20 and column 2 lines 24-67.

Nasburg discloses the micromodel provides the traffic engineer with an intuitive and efficient method for describing or modeling complex traffic intersections and interchanges so that the kinematic behavior of all vehicles within that interchange can be predicted. Parameters provided as inputs by the traffic engineer are mapped directly

Art Unit: 3692

to a set of differential equations governing the movement through time of all vehicles within the interchange. The result is a compact dynamic model usable in vehicle tracking applications and in graphic simulations, including real time simulations, of vehicles as they proceed through the interchange .see column 8 lines 4-14.

Further Nasburg discloses a simulation of traffic flow based on collected data and the type of data would not have affected simulation results.

Therefore it obviously clear that Applicant's claimed limitations were addressed within the teachings of Conway and Nasburg.

5. Applicant's also maintains that Conway and Nasburg cannot be combined, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. In *re Fine*, 837 F.2d 1071, 5USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also *In re Eli Lilli & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); *In re Nilssen*, 851 F.2d 1401, 7USPQ2d 1500 (Fed. Cir. 1988) (references do not have to explicitly suggest combining teachings); *Ex parte Clapp*, 227 USPQ 972 (Bd. Pat. App & Inter); and *Es parte*

Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning).

Also in reference to *Ex parte Levengood*, 28 USPQ2d, 1301, the court stated that

"Obviousness is a legal conclusion, the determination of which is a question of patent law.

Art Unit: 3692

Motivation for combining the teachings of the various references need not to explicitly found in the reference themselves, In re Keller, 642 F.2d 413, 208USPQ 871 (CCPA 1981). Indeed, the Examiner may provide an explanation based on logic and sound scientific reasoning that will support a holding of obviousness. In re Soli, 317 F.2d 941 137 USPQ 797 (CCPA 1963)."

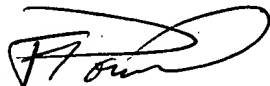
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement B Graham whose telephone number is 703-305-1874. The examiner can normally be reached on 7am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Sough can be reached on 703-305-0505. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-305-0040 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CG

March 21, 2007


FRANTZY POINVIL
PRIMARY EXAMINER
Au 3692